NASA INFORMATION SYSTEMS
SCIENCE INFORMATION SYSTEMS NEWSLETTER

Women Of NASA Inspire Young Scientists And Mathematicians

Susan Lee, Sterling Software, Ames Research Center

The Women of NASA project was developed by the Kindergarten Through Grade12 Internet Initiative at Ames Research Center to encourage more young women to pursue careers in math, science and technology. Although these fields are still predominately male, the appreciation of cultural and gender diversity in the workplace is growing. The Women of NASA interactive project supports this trend by providing as role models outstanding women working in diverse fields at NASA who are thriving in math, science, and technology careers. Project Manager, Tish Krieg, comments, "Our NASA mentors are an impressive group of women. They continue to amaze me with their unlimited amount of energy, compassion for young people, and generous commitment of time. What students see is an outstanding group of women who are dedicated to their work at NASA and who are successful in balancing their professional careers and personal life."

The main component

The biographies of the participants are the main component of this project. These are not merely the formal curriculum vitae of highly accomplished professional women. They offer insights about early childhood aspirations, experiences of success and failure in math and science, pivotal activities and mentors, and some personal insights that identify the Women of NASA as people children can imagine meeting in their everyday world. For example, an astrophysicist may relate that she relaxes by reading mystery stories. Other project components include a Day in the Life of... supplements, teaching tips, and links to additional resources.

Children can interact with the Women of NASA through regularly scheduled WebChats. The WebChats focus on scientific and technical topics particular to their field of work, necessary education, and gender-equity issues. Currently, chats are held on Tuesdays at different times to accommodate classrooms in different time zones. A detailed calendar of times and featured women is listed on :

http://quest.arc.nasa.gov/women/wonchat.html

A webchat

Chat sessions are available by linking from the featured woman's profile in the chat schedule. WebChat participants are encouraged to

read the biography of the featured woman prior to the chat in order to be able to ask informed questions. Here is an example of a WebChat with Catherine Collins, chief of Opportunity and Outreach for the Stardust Project at the Jet Propulsion Laboratory:

Q: I have a few questions from my Brownie troop. We're studying careers. How do you take pictures in space?

A: In unpiloted spacecraft, such as Galileo, pictures are taken through a "sequence" of computer commands that tell the camera which filter to use, how long to open the shutter, how much light to let in, where to point, etc. We do all the calculations ahead of time here on Earth.

Q: What is your advice to young students?

A: My advice to young students is to be nice to yourselves. It can be very stressful to learn new things and it's too easy to feel like a dummy. Different things come easily to different people. Some people are good at math, some at social studies, some at gym, some at art (I stank at art). Concentrate on what you like and/or what you are good at and work at the rest, but don't beat yourself up if you have to work harder to learn some things than others.

Q: You said in your bio that you were most proud of the pictures you took of the meteorite hitting Jupiter (if I remember that right!), What other accomplishments are you most proud of?

A: I took pictures of a comet (Shoemaker-Levy 9) running into Jupiter. It was great! I am also proud of maintaining my sense of self and my integrity in this difficult world. That is of grave importance to me.

Responses

Responses from educators and parents has been enthusiastic. The media is also interested in this project as both Microsoft, the National Broadcast Company, and Cable News Network are planning features.

One parent wrote in to say, "I think what Fanny said in her bio is right on target. She said she wished she would have known what an engineer actually did, and I think this project is giving some those answers. The clarification on the difference in aeronautics and aerospace was so exciting to the (the children). Thank everyone again for taking time to spend with our young people."

A high school teacher stated, "Several girls in my physics class enjoyed exploring the web page and I've downloaded several of the biographies to distribute among female students. This may be a simple concept but these kids are starved for validation that it's OK and cool to be into science and math."

The Director of Penn State's Upward Bound Math and Science Center, a program that serves low income and potential first generation college students interested in pursuing careers in math and science, said, "The information you put on the homepage is read by our students. It is a great resource. The interactive portion of the homepage is especially important, in my opinion. It allows our students to communicate with NASA women, and read encouraging words from women who have been in similar situations as our students and who have 'made it' through college and into a successful career. Thank you so much for the Women of NASA project."

"This was our first live chat of this nature and I "experimented" with just three girls. I can't tell you the impact it made on them. One of the most powerful things that you did was to compliment them for having read the biography and sticking to the content.You guessed it...that was part of the lesson for the girls!.....Again....many thanks for your time and patience with the girls. You have really made a difference!"

NASA's K-12 Internet Initiative works to help K-12 schools harness the power of the Internet. Using on-line interactive projects

allows students to experience the excitement of real scientific exploration.

For further information on Women of NASA access the Web site or contact Karen Traicoff, respectively at:

http://quest.arc.nassa.gov/women/

traicoff@quest.arc.nasa.gov

For information on additional projects funded by the Information Infrastructure Technology and Applications Program access any of the following K-12 Web sites:

Online From Jupiter
Active dates: February -March 1997
http://quest.arc.nasa.gov/galileo

Shuttle Team Online
Active dates:March 1997-May 1997
http://quest.arc.nasa.gov/mars